

ENGINEERING REPORT

Equipment Performance Measurements

Testing was conducted November 5, 2020 to verify compliance with FCC Rule 73.44 at Radio Station KFOR, 1240 kHz, Lincoln, NE. Measurements were collected at a location approximately 1 km from the antenna using equipment described below. The transmitter was operating at the prescribed 1 kW power level, and was being modulated with normal program material at the time of measurement. Field Intensity at the point of observation: 350 mv/m.

Emission close to the carrier was observed on an RF Spectrum Analyzer of the proper characteristics in the peak hold mode, using a loop antenna to receive the signal. The levels of the fundamental, second, third, and fourth harmonics were measured with a Field Intensity Meter. Spurious emission beyond 75 kHz from the carrier was also checked by observing the analyzer and scanning through the 13th harmonic of the fundamental using a communications receiver and loop antenna. The images observed on the Spectrum Analyzer were captured using the internal memory of the instrument and appear on pages 2 and 3 of this report.

The loop antenna was oriented to reduce AC power line interference as much as possible.

A tabulation of harmonic measurements and plots of spectrum analyzer displays follow.

Engineer

Robert E. Cook

Date

12/19/20

LIST OF EQUIPMENT

ANRITSU Model MS2712E Spectrum Analyzer, serial no. 0950163. Calibrated April 5, 2013

POTOMAC INSTRUMENTS Model PI4100 Field Intensity Meter, serial no. 161. Last calibration: Feb 12, 2009. Field checked December 8, 2014.

YAESU Model FRG-100 Communications Receiver, serial no. 3L120305. Last calibration: June, 1993.

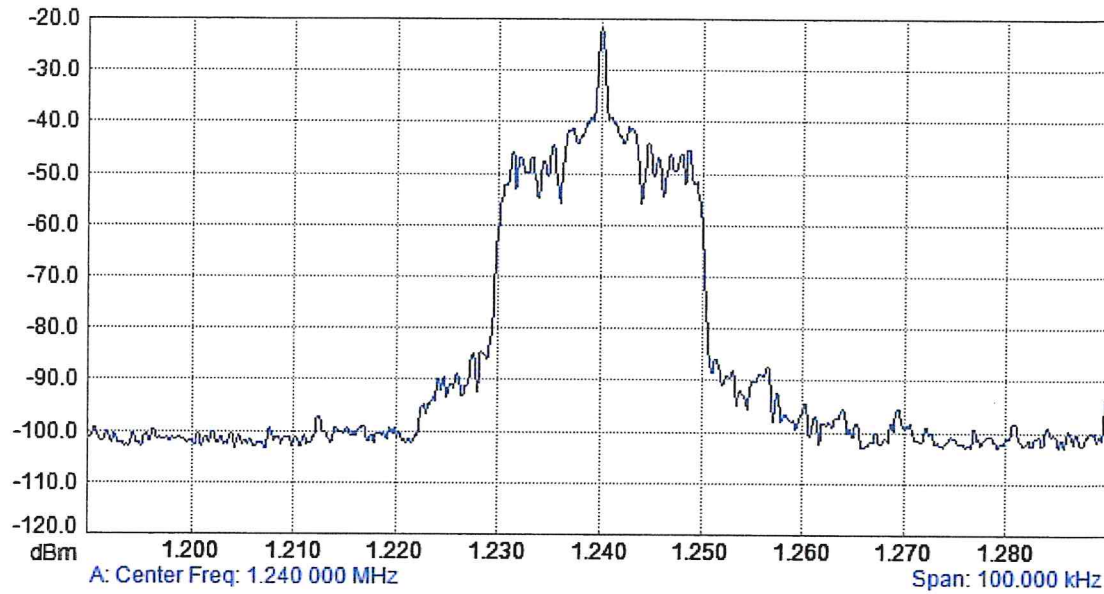
SPURIOUS EMISSION

<u>Frequency</u>	<u>Signal</u>	<u>Time</u>
1240 kHz	350 mv/m	12:58
2480 kHz	>-80.0 dbc	12:58
3720 kHz	>-80.0 dbc	12:59
4960 kHz	>-80.0 dbc	12:59
4th -13th harmonics were not detectable		

Spectrum Analyzer Data

KFOR-1C (11/5/2020 1:01:24 PM)

Spectrum Analyzer



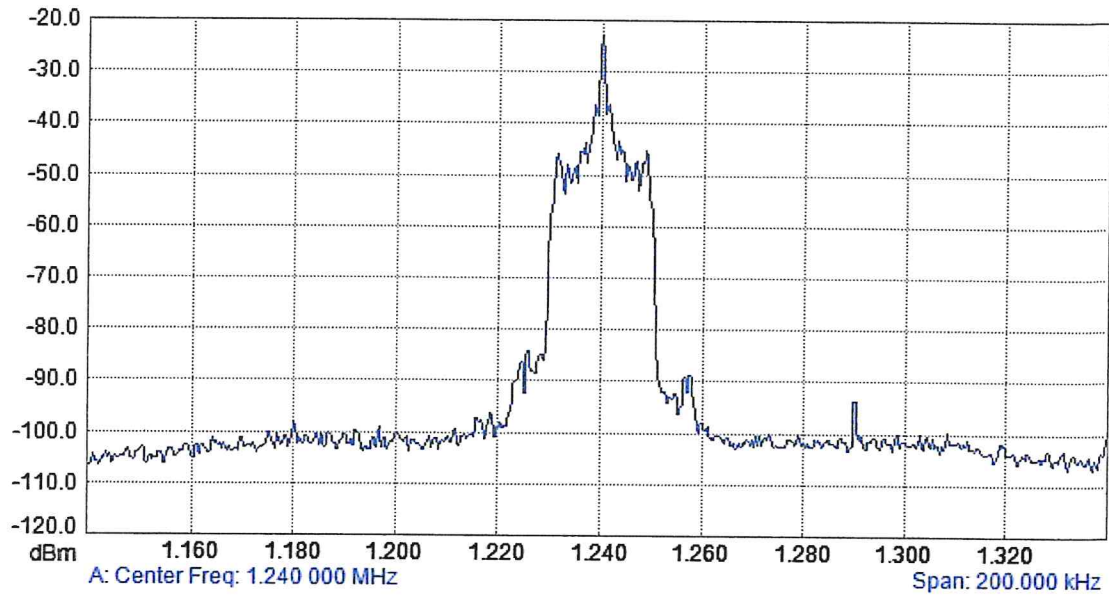
Measurement Parameters

Trace Mode	Max Hold	Stop Frequency	1.290 000 MHz
Preamp	OFF	Frequency Span	100.000 000 kHz
Min Sweep Time	0.001 S	Reference Level	-20.000 dBm
Reference Level Offset	0 dB	Scale	10.0 dB/div
Input Attenuation	0.0 dB	Serial Number	950163
RBW	300.0 Hz	Base Ver.	V4.47
VBW	300.0 Hz	App Ver.	V5.93
Detection	Peak	Model	MS2712E
Center Frequency	1.240 000 MHz	Options	10, 31
Start Frequency	1.190 000 MHz	Date	11/5/2020 1:01:24 PM
		Device Name	

Spectrum Analyzer Data

KFOR-2C (11/5/2020 1:02:07 PM)

Spectrum Analyzer



Measurement Parameters

Trace Mode	Max Hold	Stop Frequency	1.340 000 MHz
Preamp	OFF	Frequency Span	200.000 000 kHz
Min Sweep Time	0.001 S	Reference Level	-20.000 dBm
Reference Level Offset	0 dB	Scale	10.0 dB/div
Input Attenuation	0.0 dB	Serial Number	950163
RBW	300.0 Hz	Base Ver.	V4.47
VBW	300.0 Hz	App Ver.	V5.93
Detection	Peak	Model	MS2712E
Center Frequency	1.240 000 MHz	Options	10, 31
Start Frequency	1.140 000 MHz	Date	11/5/2020 1:02:07 PM
		Device Name	